The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ US

PCT

CHAPTER II

DEMAND

under Article 31 of the Patent Cooperation Treaty:
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty.

For International Preliminary Examining Authority use only

Identification of IPEA	Date of receipt of DEMAND

Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION

Applicant's or agent's file reference: 33751-03

International application No.	International filing date *(day/month/year)*	(Earliest) Priority date *(day/month/year)*
PCT/US2004/035196	22 OCTOBER 2004 (22.10.04)	24 OCTOBER 2003 (24.10. 03)

Title of invention: MONITORING SYSTEM

Box No. II APPLICANT(S)

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

FULLER, Andrew C.
1253 Camp Buddy Road
Ridgeville, South Carolina 29472
United States of America

Telephone No.: 800.410.5660
Facsimile No.: 843.835.5298
Teleprinter No.:
Applicant's registration No. with the Office:

State *(that is, country)* of nationality:	State *(that is, country)* of residence:
US	US

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

State *(that is, country)* of nationality:	State *(that is, country)* of residence:

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

State *(that is, country)* of nationality:	State *(that is, country)* of residence:

☐ Further applicants are indicated on a continuation sheet.

International application No.
PCT/US2004/035196

Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The following person is [X] agent [ ] common representative

and [X] has been appointed earlier and represents the applicant(s) also for international preliminary examination.

[ ] is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.

[ ] is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

HARDAWAY, John B., III; MANN, Michael A.;
O'TOOLE, J. Herbert; CENTIONI, Sara A.
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Greenville, South Carolina 29603
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Agent's registration No. with the Office
26554; 32825; 31404; 50543

[ ] **Address for correspondence:** Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION

Statement concerning amendments:*

1. The applicant wishes the international preliminary examination to start on the basis of:

[ ] the international application as originally filed

the description [X] as originally filed
[ ] as amended under Article 34

the claims [ ] as originally filed
[ ] as amended under Article 19 (together with any accompanying statement)
[X] as amended under Article 34

the drawings [X] as originally filed
[ ] as amended under Article 34

2. [ ] The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.

3. [ ] Where the IPEA wishes to start the international preliminary examination at the same time as the international search in accordance with Rule 69.1(b), the applicant requests the IPEA to postpone the start of the international preliminary examination until the expiration of the applicable time limit under Rule 69.1(d).

4. [ ] The applicant expressly wishes the international preliminary examination to start earlier than at the expiration of the applicable time limit under Rule 54*bis*.1(a).

* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: ENGLISH

[X] which is the language in which the international application was filed.
[ ] which is the language of a translation furnished for the purposes of international search.
[ ] which is the language of publication of the international application.
[ ] which is the language of the translation (to be) furnished for the purposes of international preliminary examination.

Box No. V ELECTION OF STATES

The filing of this demand constitutes the election of all Contracting States which are designated and are bound by Chapter II of the PCT.

Sheet No. . . 3

International application No.
PCT/US2004/035196

Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

			For International Preliminary Examining Authority use only: received	not received
1. translation of international application	:	sheets	☐	☐
2. amendments under Article 34	:	4 sheets	☐	☐
3. copy (or, where required, translation) of amendments under Article 19	:	sheets	☐	☐
4. copy (or, where required, translation) of statement under Article 19	:	sheets	☐	☐
5. letter	:	2 sheets	☐	☐
6. other *(specify)*	:	sheets	☐	☐

The demand is also accompanied by the item(s) marked below:

1. ☒ fee calculation sheet
2. ☐ original separate power of attorney
3. ☐ original general power of attorney
4. ☐ copy of general power of attorney; reference number, if any:
5. ☐ statement explaining lack of signature
6. ☐ sequence listing in electronic form
7. ☐ tables in electronic form related to a sequence listing
8. ☒ other *(specify)*: RETURN POST CARD

Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

Sara A. Centioni

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.
   ☐ The applicant has been informed accordingly.
4. ☐ The date of receipt of the demand is WITHIN the time limit of 19 months from the priority date as extended by virtue of Rule 80.5.
5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.
6. ☐ The date of receipt of the demand is AFTER the expiration of the time limit under Rule 54*bis*.1(a) and item 7 or 8, below, does not apply.
7. ☐ The date of receipt of the demand is WITHIN the time limit under Rule 54*bis*.1(a) as extended by virtue of Rule 80.5.
8. ☐ Although the date of receipt of the demand is after the expiration of the time limit under Rule 54*bis*.1(a), the delay in arrival is EXCUSED pursuant to Rule 82.

For International Bureau use only

Demand received from IPEA on:

See Notes to the demand form

CHAPTER II

PCT

FEE CALCULATION SHEET

Annex to the Demand

International application No. PCT/US2004/035196	For International Preliminary Examining Authority use only
Applicant's or agent's file reference 33751-03	Date stamp of the IPEA

Applicant

FULLER, Andrew C.

CALCULATION OF PRESCRIBED FEES

1. Preliminary examination fee	$600 P	
2. Handling fee *(Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee.)*	173 H	
3. Total of prescribed fees Add the amounts entered at P and H and enter total in the TOTAL box	$773 TOTAL	

MODE OF PAYMENT

- [X] authorization to charge deposit account with the IPEA (see below)
- [ ] cash
- [ ] cheque
- [ ] revenue stamps
- [ ] postal money order
- [ ] coupons
- [ ] bank draft
- [ ] other *(specify):*

AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT

(This mode of payment may not be available at all IPEAs)

IPEA/ US

- [X] Authorization to charge the total fees indicated above.
- [X] *(This check-box may be marked only if the conditions for deposit accounts of the IPEA so permit)* Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.

Deposit Account No.: 08-0719

Date: 24 August 2005

Name: Sara A. Centioni

Signature: Sara A. Centioni

See Notes to the fee calculation sheet

WHAT IS CLAIMED IS:

1. A dehumidification system, comprising:

a dehumidifier;

a user interface;

a humidity sensor for determining relative humidity of an area;

means carried by said user interface for selecting a desired humidity for said area;

a building material moisture sensor for measuring the building material moisture in said area;

means for selecting a desired building material moisture; and

a controller interconnected with said dehumidifier, said humidity sensor, said desired humidity selecting means, said building material moisture sensor, and said desired building material moisture selecting means, wherein said controller activates said dehumidifier when the relative humidity is higher than said desired humidity, and wherein said controller activates said dehumidifier when the actual building material moisture is higher than said desired building material moisture.

2. The dehumidification system as recited in claim **1**, wherein said dehumidifier, said user interface, and said controller are connected by electrical wiring.

3. The dehumidification system as recited in claim **1**, wherein said dehumidifier, said user interface, and said controller are connected by wireless connection.

4. The dehumidification system as recited in claim **1**, further comprising a plurality of fans that are connected to said dehumidifier.

5. The dehumidification system as recited in claim **1**, wherein said user interface unit includes a service light.

6. The dehumidification system as recited in claim **1**, wherein said user interface unit includes a display, wherein said display shows the relative humidity, said desired humidity, and the temperature of said area.

7. The dehumidification system as recited in claim **1**, wherein said user interface unit includes a power input.

8. The dehumidifier as recited in claim **1**, wherein said controller activates said dehumidifier either when the relative humidity is higher than said desired humidity or

when the actual building material moisture is higher than said desired building material moisture.

9. A method for maintaining the moisture level of an area at or below a pre-selected level, comprising:

installing a dehumidifier;

installing a user interface;

installing a humidity sensor for determining relative humidity of an area;

installing means for selecting a desired humidity for said area;

installing a building material moisture sensor for measuring building material moisture;

installing a controller; and

connecting said dehumidifier, said user interface, said humidity sensor, said desired humidity selecting means, said building material moisture sensor, and said controller, wherein said controller activates said dehumidifier when the relative humidity is higher than said desired humidity.

10. The method as recited in claim **9**, further comprising installing at least one fan.

11. The method as recited in claim **10**, further comprising connecting said at least one fan to said dehumidifier.

12. The method as recited in claim **9**, further comprising installing means for selecting a desired building material moisture, wherein said controller activates said dehumidifier when the actual building material moisture is higher than said desired building material moisture.

13. The method as recited in claim **9**, wherein said user interface has a display that is remote from said dehumidifier.

14. The method as recited in claim **13**, wherein said display includes said selecting means.

15. The method as recited in claim **14**, further comprising selecting a desired humidity.

16. The method as recited in claim **9**, wherein said connecting step is done by wireless connection.

17. The method as recited in claim **9**, wherein said connecting step is done by electrical wiring.

18. The method as reciting in claim **9**, further comprising connecting said dehumidifier, said user interface, said humidity sensor, said selecting means, and said controller to an alarm system.

19. A monitoring system, comprising:

a sensor for determining the humidity, moisture, and temperature of an area;

a first controller that is connected to said sensor, said first controller capable of receiving multiple inputs including a humidity input, a moisture input, and a temperature input;

means for communicating the humidity, moisture, and temperature to said first controller;

means for warning when the humidity, moisture, and temperature within said area is above a preset, desired humidity, moisture, and temperature, said warning means being connected to said first controller; and

means for adjusting the humidity, moisture, and temperature to approximately equal to or below the preset, desired humidity, moisture, and temperature, said adjusting means being connected to said warning means.

20. The monitoring system as recited in claim **19**, wherein said adjusting means includes a dehumidification system, comprising:

a dehumidifier;

a user interface;

a humidity sensor for determining relative humidity of an area;

means carried by said user interface for selecting a desired humidity for said area; and

a second controller interconnected with said dehumidifier, said humidity sensor, and said selecting means, and wherein said second controller activates said dehumidifier when the relative humidity is higher than said desired humidity.

21. The monitoring system as recited in claim **20**, further comprising a ventilation system connected to said dehumidification system.

22. The monitoring system as recited in claim 19, wherein said adjusting means includes a dispatched repair person

23. The monitoring system as recited in claim 19, further comprising means for warning said first controller when said adjusting means has malfunctioned and is in need of maintenance.

24. The monitoring system as recited in claim 19, wherein said sensor, said first controller, said communicating means, said warning means, and said adjusting means are electrically connected.

25. The monitoring system as recited in claim 19, wherein said sensor, said first controller, said communicating means, said warning means, and said adjusting means are connected by radio frequency communication.

26. The monitoring system as recited in claim 19, wherein said sensor, said first controller, said communicating means, said warning means, and said adjusting means are connected by wireless communication.

27. The monitoring system as recited in claim 19, wherein said sensor includes multiple sensors in a single housing for detecting a combination of humidity, moisture, and temperature.